

# HOG shelters and equipment

## FOR SOUTHERN STATES

ALABAMA  
ARKANSAS  
FLORIDA  
GEORGIA  
KENTUCKY  
LOUISIANA  
MISSISSIPPI  
OKLAHOMA  
NORTH CAROLINA  
SOUTH CAROLINA  
TENNESSEE  
TEXAS  
VIRGINIA



UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURE HANDBOOK NO. 115

DOCUMENT

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# HOG SHELTERS AND EQUIPMENT FOR SOUTHERN STATES

*Compiled by . . .* THE AGRICULTURAL RESEARCH SERVICE AND THE FEDERAL EXTENSION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE, IN COOPERATION WITH THE AGRICULTURAL ENGINEERING DEPARTMENTS AND THE COOPERATIVE EXTENSION SERVICES IN AGRICULTURE AND HOME ECONOMICS AT THE FOLLOWING COLLEGES AND UNIVERSITIES.

Alabama Polytechnic Institute.....	Auburn, Ala.
College of Agriculture, University of Arkansas.....	Fayetteville, Ark.
College of Agriculture, University of Florida.....	Gainesville, Fla.
College of Agriculture, University of Georgia.....	Athens, Ga.
University of Kentucky.....	Lexington, Ky.
Louisiana State University.....	University Station, Baton Rouge, La.
Mississippi State College.....	State College, Miss.
North Carolina State College.....	Raleigh, N. C.
Oklahoma Agricultural and Mechanical College.....	Stillwater, Okla.
Clemson Agricultural College.....	Clemson, S. C.
College of Agriculture, University of Tennessee.....	Knoxville, Tenn.
Agricultural and Mechanical College of Texas.....	College Station, Tex.
Virginia Polytechnic Institute.....	Blacksburg, Va.
University of Puerto Rico.....	Rio Piedras, P. R.

UNITED STATES DEPARTMENT OF AGRICULTURE  
Washington, D. C., February 1957

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# INTRODUCTION

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FARM BUILDING PLAN SERVICES are organized in four regions—the South, West, Northeast, and Midwest. These plan services are conducted cooperatively by the United States Department of Agriculture, the State extension services, and in some States the agricultural engineering departments of the State agricultural colleges. The best plans for various types of farm buildings developed by the State colleges or the Department of Agriculture are made available to farmers through the plan services within the region for which they are suited.

## How plans were selected

The plans illustrated in this publication were selected by a committee representing the State agricultural colleges of the Southern States listed on page 3. Included are various types of buildings and equipment for hog production. These plans incorporate the latest research findings and the best available information on the arrangement and construction of such buildings and equipment.

## Planning for local conditions

The plans shown in this handbook are generally adapted to conditions in the Southern States. A few designs, however, may not be suitable for particular parts of the region without some modification.

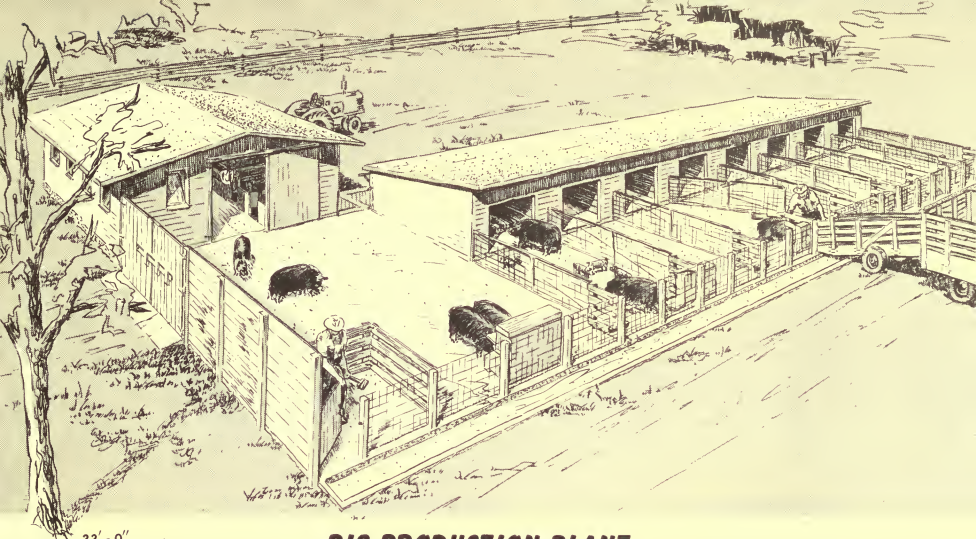
Climatic conditions differ in various parts of the South. Although very cold weather is not usually a serious consideration in the South, some snow and freezing weather may be expected in the northern part of the region and will have an effect on roof loads and on the depth of foundations. Wind loads are an important consideration, especially in those areas subject to hurricanes, and will affect the size and fastening of framing members, and the fastening of sills and posts to foundation walls and piers, especially of larger structures. Soil conditions and rainfall should also be considered in planning foundations.

Before selecting a plan the prospective builder should consult his county agricultural agent. The county agent can help select the plan and recommend any modifications that may be necessary, owing to local climatic conditions or other factors.

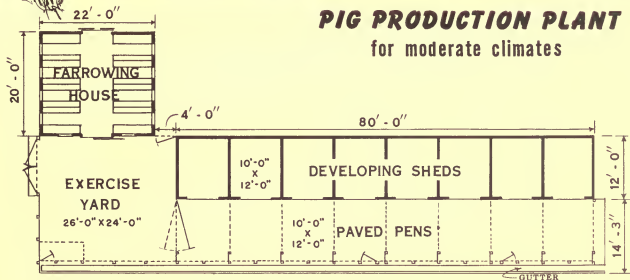
Many States have additional plans not shown in this publication. The county agent can also give information about such plans and about bulletins and other material on building construction. Special drawings to meet individual needs are not ordinarily furnished by the agricultural colleges, although some States provide this service in special cases.

## Selection of materials

Many of the structures for which plans are shown can be built or covered with a variety of materials. Choice may depend on availability and prices as well as the skill of local builders. Homegrown timber may be used in the form of poles, logs, or sawed lumber. Any wood in contact with the ground should be treated with preservatives to give long life, and poles to be set in the ground should preferably be pressure treated with preservatives. Sawed lumber should be properly piled and thoroughly seasoned before use.



## PIG PRODUCTION PLANT for moderate climates



This efficient production plant consists of a farrowing house and feeding and exercise pen, 8 developing sheds with outdoor pens, each accommodating 2 sows and their litters.

The farrowing house has a 6-foot-wide center alley with a litter carrier on an overhead track. The 8 farrowing stalls are permanently installed.

This layout is suitable for farms where the plant will be filled 3 to 6 times each year. Sows are held in the farrowing stalls about 2 weeks and in the developing sheds until pigs are about 8 weeks old.

**PLAN NO. 5825**  
( 3 SHEETS )

# CENTRAL FARROWING HOUSE

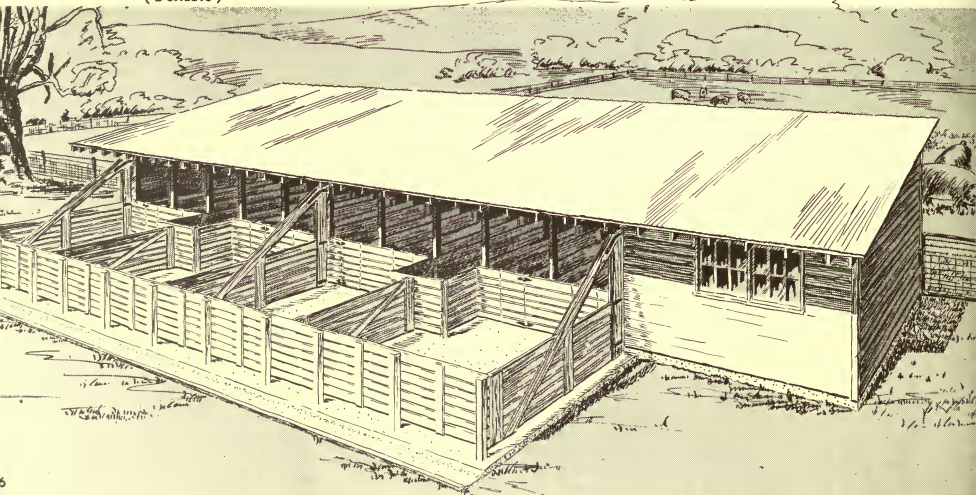
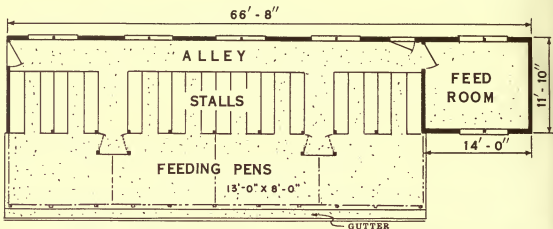
for hot climates

This open-front house has 8 permanent farrowing stalls that open into paved feed and exercise pens.

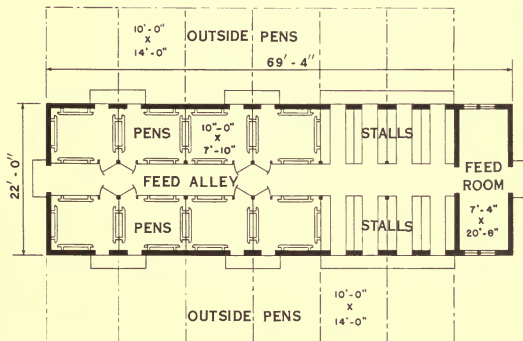
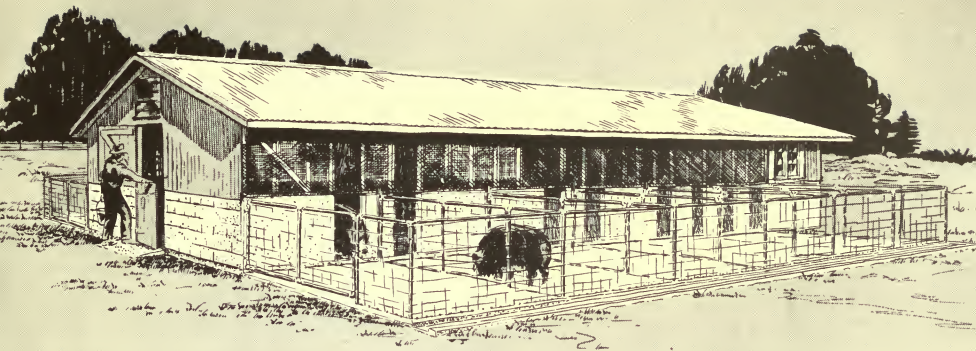
The alley arrangement enables the operator to care readily for the pigs. The partitions between the outside pens are hinged so that they can be swung aside and the pens cleaned with a tractor and blade.

## PLAN NO.5795

( 2 SHEETS )







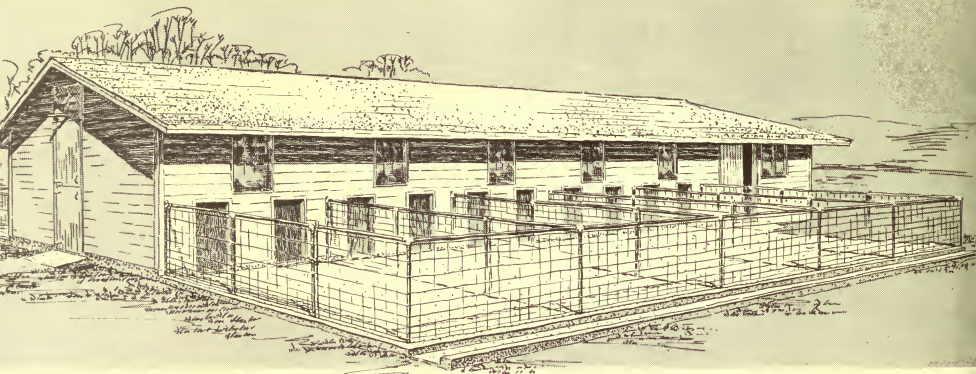
## **CENTRAL FARROWING HOUSE** for hot climates

The building has 8 pens. The 8 farrowing stalls can be removed and the space converted into pens if desired. Each pen will accommodate 2 sows with litters. Additional pens and stalls can be provided by lengthening the building.

The upper part of the side walls is open except for screening, and the lower half is of concrete block. In case of cold or rainy weather during farrowing, curtains can be used to keep the house warm and minimize drafts. Wide eaves also help protect against rain and keep out sun in hot weather.

**PLAN NO. 5822**  
( 2 SHEETS )

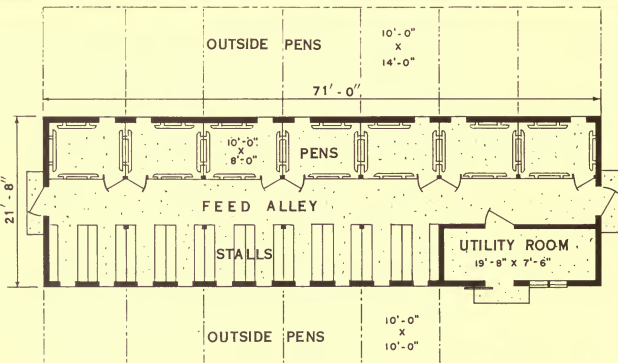
# CENTRAL FARROWING HOUSE for moderate climates



This closed farrowing house is suitable for the colder parts of the region.

The 10 farrowing stalls will usually remain in place but may be removed if desired. Each is provided with a door so that each sow can be moved to outside pens for feeding and exercise without having to take her through the central alley. Each interior pen will accommodate 2 sows with litters.

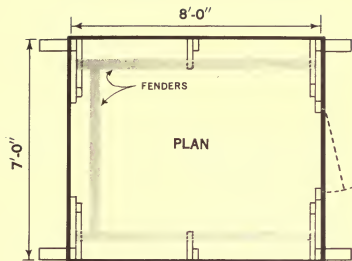
The walls of this house are finished inside, and the roof and floor are insulated.



**PLAN NO. 5823**

( 2 SHEETS )





## ONE-PEN HOG HOUSE

for one sow and litter

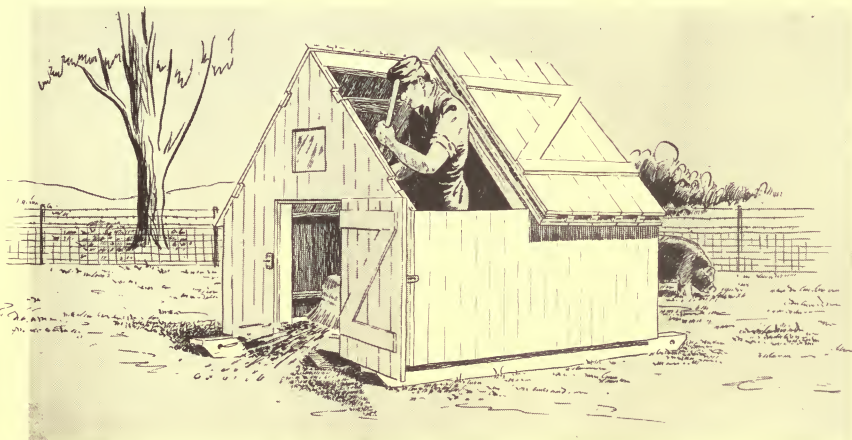
This gable-roof, colony-type hog house is simple to construct and has several good features. One-half of each side of the roof is hinged so that it can be opened to admit sunlight and for ventilation. It also simplifies cleaning.

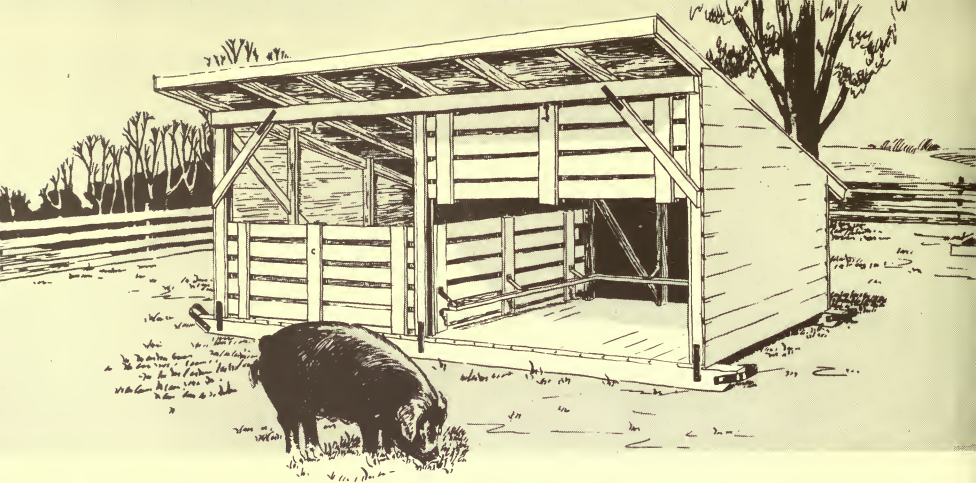
Skids make it easy to move to clean around.

The interior, which is generous in size, is equipped with fenders to prevent the sow from lying on the pigs.

**PLAN NO. 5065**

(1 SHEET)





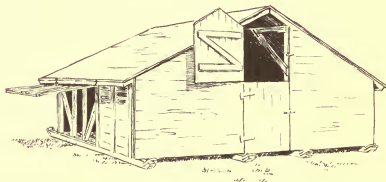
## TWO-PEN HOG HOUSE

8 x 14 feet

This house will accommodate 1 sow and her litter in each pen. It is ideal for hot weather, since the front is open and flaps on the back can also be opened to allow free movement of air through the house. It also serves as a shade when animals are not confined. The front panels are raised to let animals out.

When used as a farrowing house in cold weather, 2 units can be pushed together and doors added to form a 4-pen closed house as shown in the sketch at the right.

The house is on skids for easy moving, and it is well braced against racking.



PLAN NO. 5787

( 1 SHEET )

FOUR-PEN HOUSE

This 8- by 12-foot house is equipped with 2 farrowing stalls that are very effective in saving pigs. These stalls may be removed to provide two 6- by 8-foot pens. Each pen will accommodate 1 sow and her litter to weaning age.

A large rear-wall panel hinged at the top swings up to permit ventilation and shade in hot weather. The upper part of the front is equipped with flaps, every other one of which swings out to provide ventilation and shade and minimize rain driving in. The alternate flaps swing in to admit sunlight in cool weather.

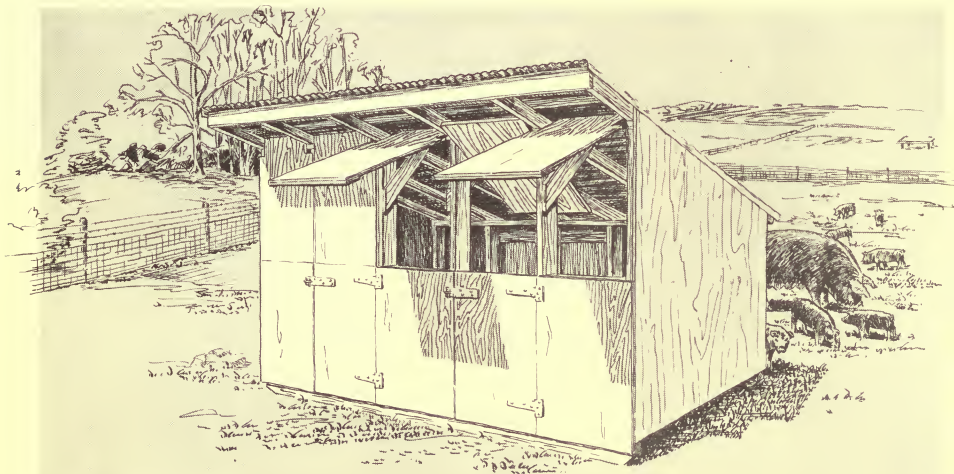
Exterior-type plywood is used for the walls. This makes the house easy to build, and stiffens the structure against racking when it is moved.

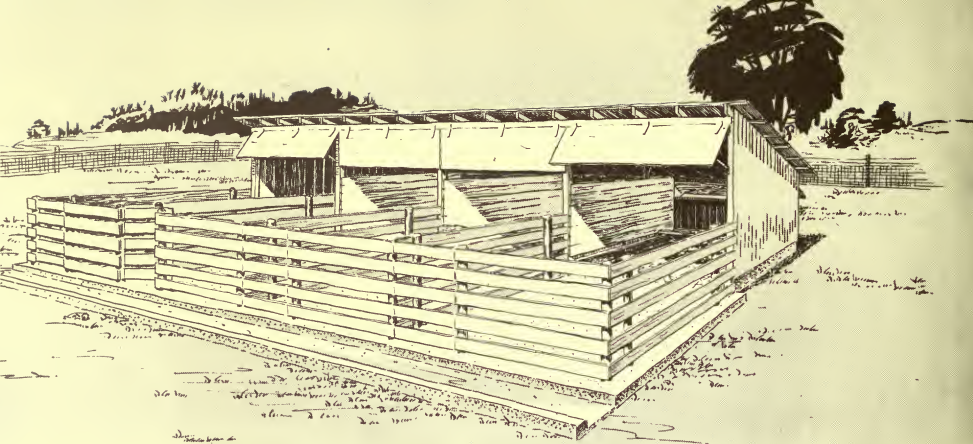
## ***TWO-PEN HOG HOUSE***

( Movable )

**PLAN NO. 5821**

( 1 SHEET )

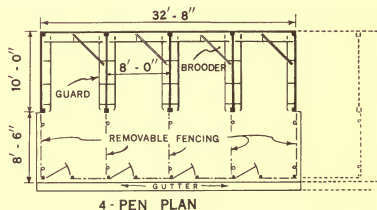




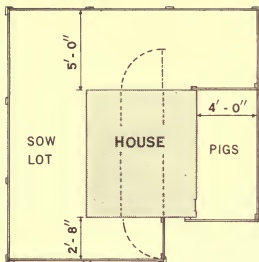
## FOUR-PEN HOG HOUSE for hot climates

The length of the building may be modified in units of 8 feet to provide for any desired number of pens. Each pen will house 1 sow and her litter. The front is open to the outside pens and flaps at the top may be adjusted to aid in regulating the amount of sunlight entering the pens. They also help to keep rain from beating in. Rear-wall flaps may be opened for additional ventilation.

The floors are concrete, and slope to a gutter outside the pens. The roof may be corrugated steel painted white or aluminum to reflect the heat. Fence panels between the outside pens are removable.



**PLAN NO. 5817**  
(1 SHEET)



## ***SINGLE FARROWING HOUSE***

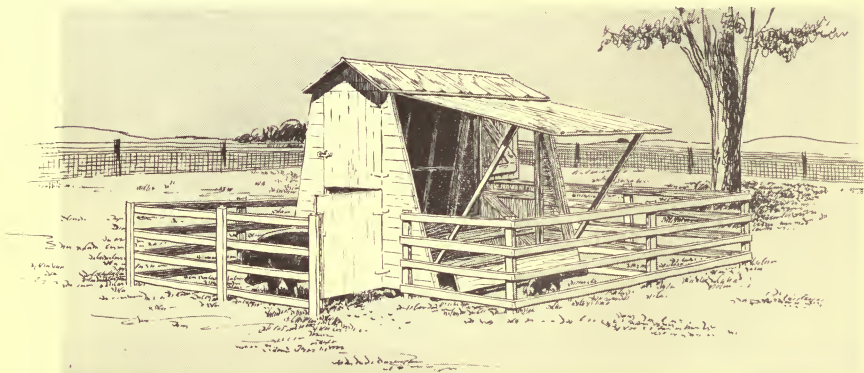
( Movable )

This 7- by 7¼-foot farrowing house for 1 sow and litter has been successfully used in hot climates. The sides are light frame construction covered with aluminum or galvanized steel and may be raised to provide shade and free movement of air in hot weather.

The sides of the farrowing stall prevent the sow from lying on the pigs and keep her confined when the sides are open.

**PLAN NO. 5770**

( 1 SHEET )





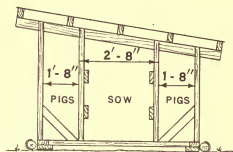
## SINGLE FARROWING HOUSE ( Movable )

This low-cost 6- by 7-foot farrowing house for 1 sow and litter is satisfactory for warm climates. The sides are open to permit air movement, but curtains could be used during cold spells to minimize drafts. During farrowing the sow is confined in the stall so that she cannot lie on the pigs.

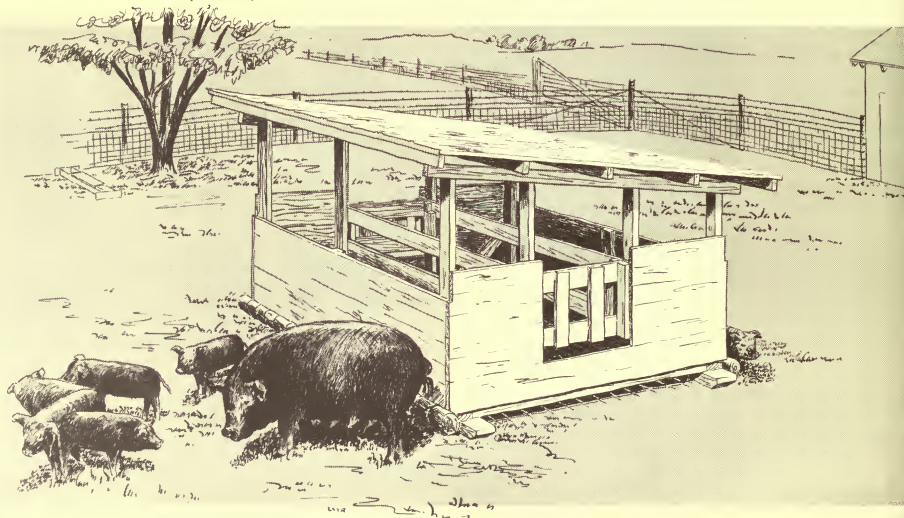
The house can be built either with or without a wood floor. If the floor is omitted, 6- by 6-inch wire mesh placed on the earth floor discourages rooting. The mesh is stapled to the logs at each side to keep it in place.

### PLAN NO. 5771

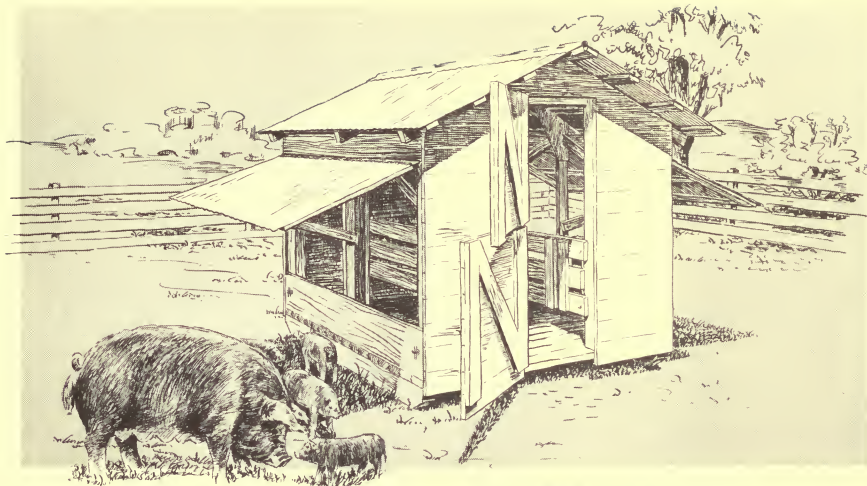
( 1 SHEET )



CROSS SECTION







## **ONE-PEN HOG HOUSE** with farrowing stall

This farrowing house, 7 feet wide and 8 feet long, for 1 sow and litter is useful in either hot or mild climates. The sides open to allow maximum air movement and to provide shade, but they can be closed in cold weather.

The sides of the farrowing stalls may be moved to serve as pig fenders, so that the building can also be used as a developing pen. The height of the house is sufficient to enable a man to enter and clean it easily.

The house is on skids for easy moving and is well braced against racking.

The roof and sides are corrugated metal.

**PLAN NO.5826**

( 1 SHEET )

# ***FARROWING STALLS***

Single or multiple units

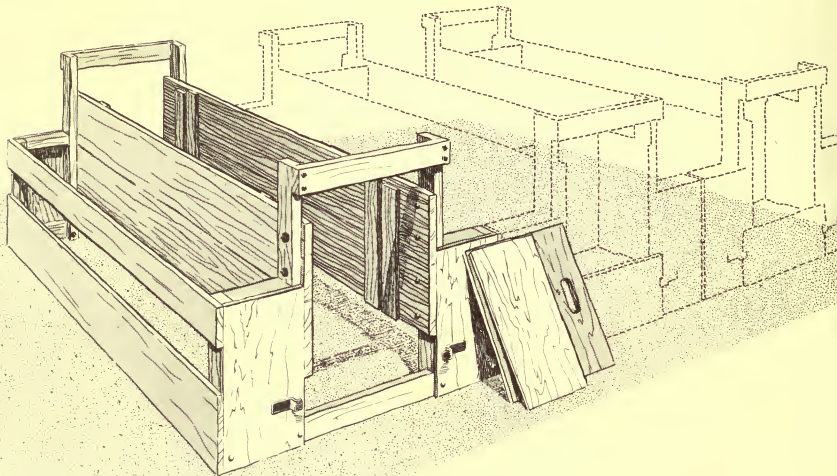
**PLAN NO. 5828**

( 1 SHEET )

These sturdy farrowing stalls are pig savers. They are designed for installation in any suitable building and are built so that they may be taken apart for removal and storage.

Each unit may be from  $4\frac{1}{2}$  to 5 feet wide and 8 feet long. These widths allow from  $1\frac{1}{4}$  to  $1\frac{1}{2}$  feet of space on both sides of the 2-foot wide sow stall for the little pigs.

Plywood panels are inserted between guides at each end of the stall to confine the sow. These are far enough back from the ends to allow the pigs to move completely around the sow.



## ELECTRIC PIG BROODERS

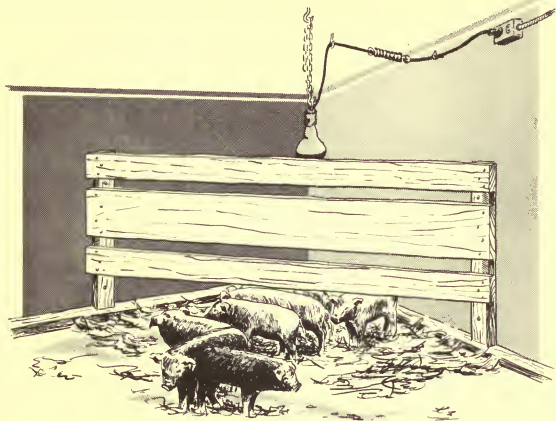
Heat is needed in cold weather to keep little pigs warm, although the sow does not require supplemental heat.

Two types of brooders that provide this warmth and at the same time prevent the sow from lying on the pigs are shown on this plan. They are designed to be built in one corner of the pen. One of the corners adjacent to the alley is recommended, since this makes it easier to take care of the pigs.

The pen-type brooder at the left is open at the top and is used with an infrared lamp, which provides heat.

The hover-type brooder shown below has a closed top and is heated by an incandescent lamp in a reflector.

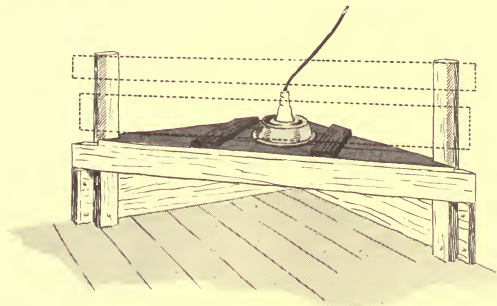
Construction details and information on wiring is shown on the working drawing.



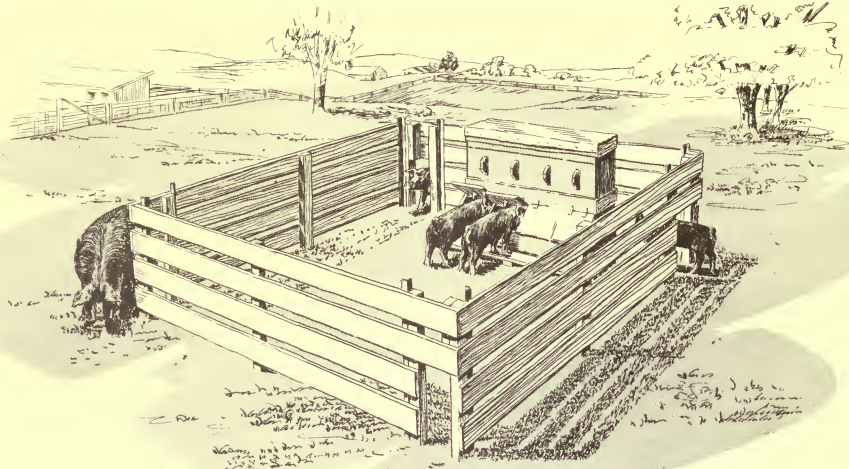
PEN TYPE

### PLAN NO. 5788

( 1 SHEET )



HOVER TYPE



## **CREEP PANELS**

A creep equipped with a self-feeder is frequently provided for young pigs when they are about 3 weeks old. The enclosure should be arranged so that only the small pigs can enter.

This plan shows 8-foot movable panels that can be erected in a fence corner or in the form of a pen, as shown in the illustration. The enclosures can be made in different sizes to accommodate the desired number of pigs.

The feeder shown is Plan 5756 illustrated on page 23.

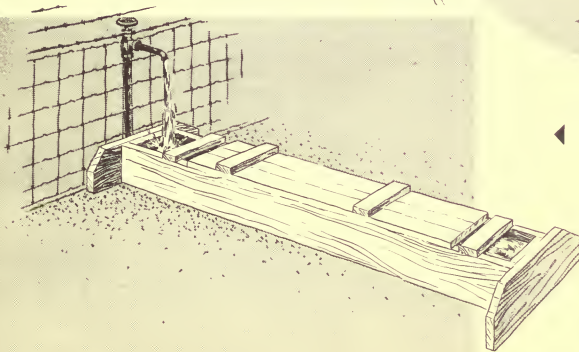
**PLAN NO. 5827**

( 1 SHEET )

## HOG TROUGHS

These simple troughs are especially handy for the small operator.

It is desirable to set the trough on a small concrete slab to provide a solid bearing and make the area easy to clean.



The flat-bottom water trough at the left is covered to prevent the hogs from getting their feet or bodies into the trough.

The 6- by 10-inch opening should service about 30 head if water is available to them at all times. The trough should be placed on a solid platform.

**PLAN NO. 5577**

(1 SHEET)

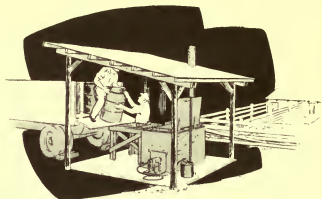


## SMALL GARBAGE COOKER

Cooking is the most satisfactory and economical method of treating raw garbage to protect swine against disease and is required by law or regulation in most States.

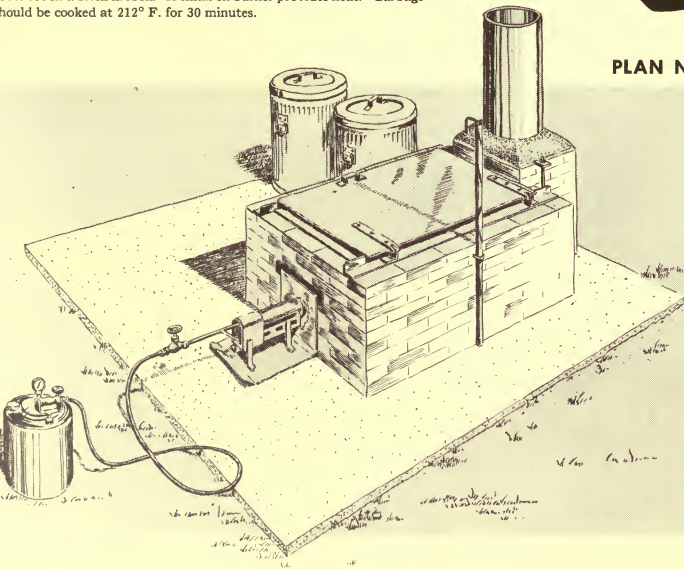
This small direct-fired garbage cooker is suitable for a small operation or for one using other feeds to supplement the garbage.

It is made of half of a 55-gallon oil drum with a hinged metal cover set on a brick firebox. A small oil burner provides heat. Garbage should be cooked at 212° F. for 30 minutes.

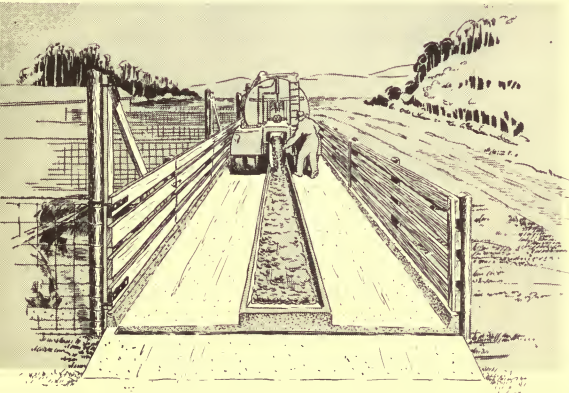
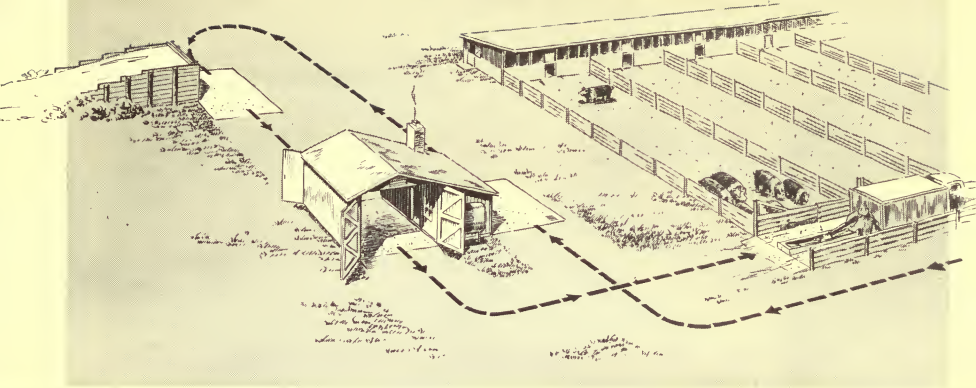


PLAN NO. 5818

(1 SHEET)







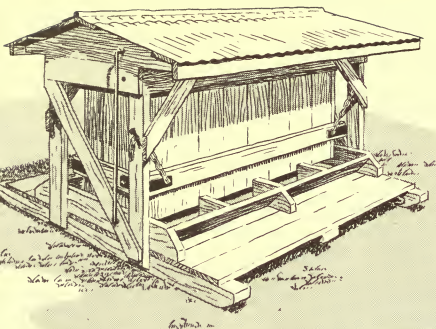
## **GARBAGE COOKING AND FEEDING LAYOUT**

This plan shows an efficient cooking and feeding arrangement that can be adapted to suit the number of hogs being fed. It is designed for use of a truck fitted with a dumping chute as shown.

The layout consists of a ramp for dumping garbage from collection truck into cooking truck, a cooking shed with a boiler where steam is turned into the load of garbage, and a drive-through alley 10 feet wide, with a feeding trough in the center as shown in the sketch at the left. Gates keep the animals out of the feed alley during filling and cleaning operations, and serve as pen dividers during feeding. This trough-feeding design was based on an allowance of 15 inches of trough space per hog to finishing weight.

**PLAN NO. 5820**

(1 SHEET)



## **SELF-FEEDER ( 10-bushel capacity )** for 16 - 24 head

The hopper of this feeder is an open-bottom wooden box that is supported by chains.

Movement of the box caused by the feeding hogs prevents the feed from bridging and aids in keeping the trough filled. The hinged cover lifts for convenience in filling.

This type of feeder has been used successfully for a number of years.

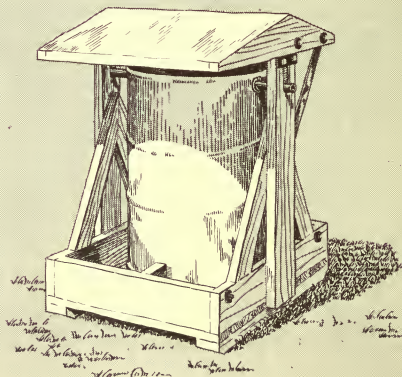
### **PLAN NO. 5814** ( 1 SHEET )

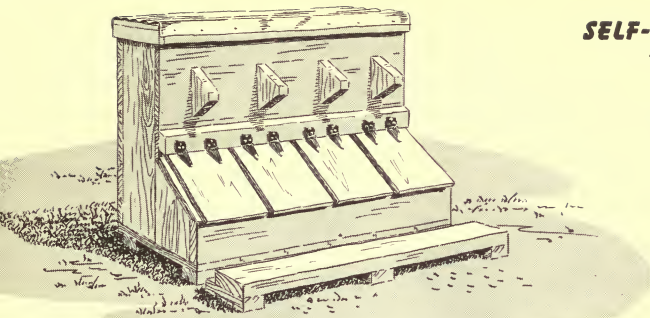
## **DRUM-TYPE SELF-FEEDER** ( 6-bushel capacity ) for 8 - 12 head

The hopper of this feeder is an oil drum with the ends removed. The drum is hung on a pipe that allows it to swing when hogs are feeding, thus keeping the feed flowing into the troughs on both sides.

The top swings open 90° to permit filling.

### **PLAN NO. 5815** ( 1 SHEET )





## **SELF-FEEDER** ( 7-bushel capacity ) for 8 - 12 head

This type of feeder has been popular for many years because it minimizes waste and keeps feed from getting wet.

The hog lifts the flaps when feeding. These fall back into place when the hog has finished.

A step is provided for the smaller animals.

**PLAN NO. 5756**

( 1 SHEET )

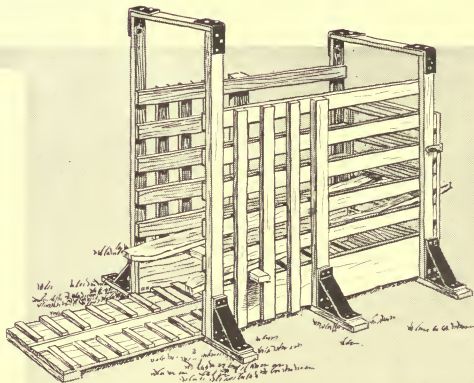
## **BREEDING CRATE**

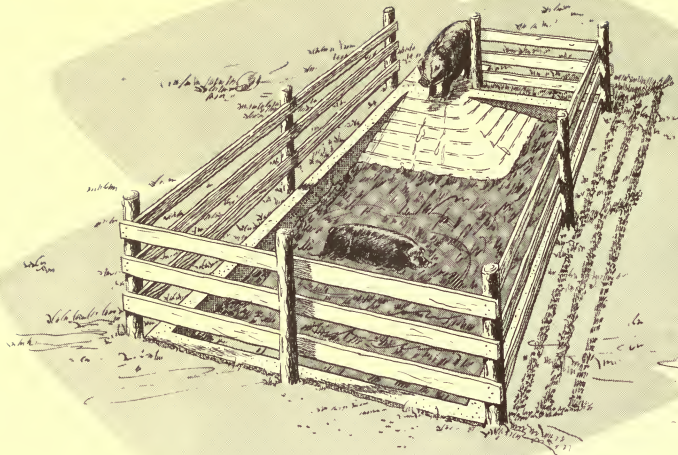
It is often difficult to mate large boars to young sows without the use of a breeding crate.

This homemade crate is easily constructed and can be provided with head gates for veterinary purposes if desired. Details of two different headgates are shown on the working drawings.

**PLAN NO. 5783**

( 1 SHEET )





## HOG WALLOW

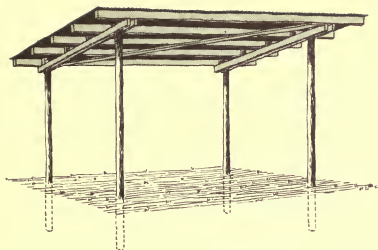
Many of the hog wallows on farms are unsanitary, unsightly mud holes.

This 10- by 16-foot concrete wallow is very satisfactory and relatively cheap to build. It takes about 300 gallons of water to fill to a 4-inch depth and is provided with a drain for cleaning.

It will accommodate 6 to 12 sows, or 15 to 20 200-pound hogs, or 25 to 28 100-pound hogs at one time.

**PLAN NO. 5757**

( 1 SHEET )



## HOG SHADES

12-x 16-ft.

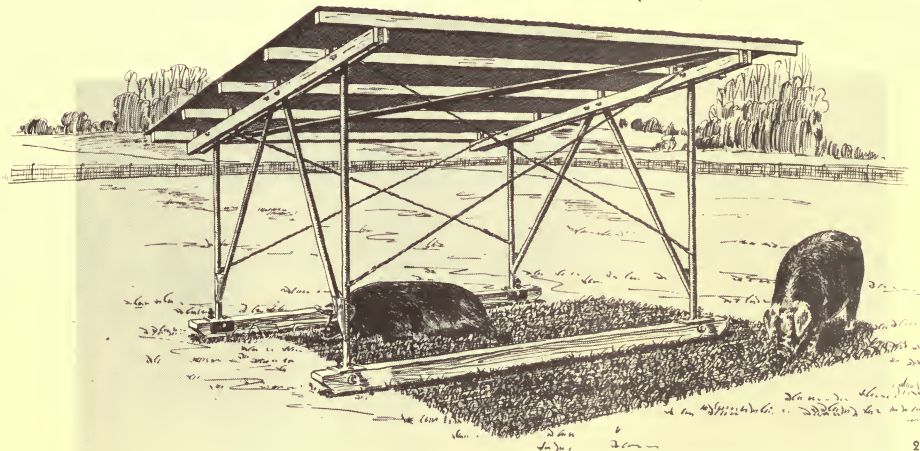
Shades provide a cheap and effective method of protecting animals from summer heat and of increasing gains. Allow 12 to 15 square feet of shade area per hog over 100 pounds.

The permanent shade shown at the left consists of poles set in the ground and roofed with aluminum, galvanized iron painted white, or with straw over chicken wire, to reflect heat. If metal roofing is used painting it black on the underside improves the effectiveness.

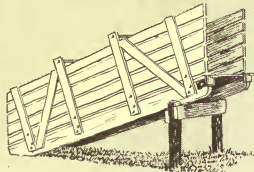
The movable shade shown below has a welded pipe frame bolted to wood skids. Wire crossties keep it from racking when being moved.

## PLAN NO. 5816

(1 SHEET)







## LOADING CHUTES

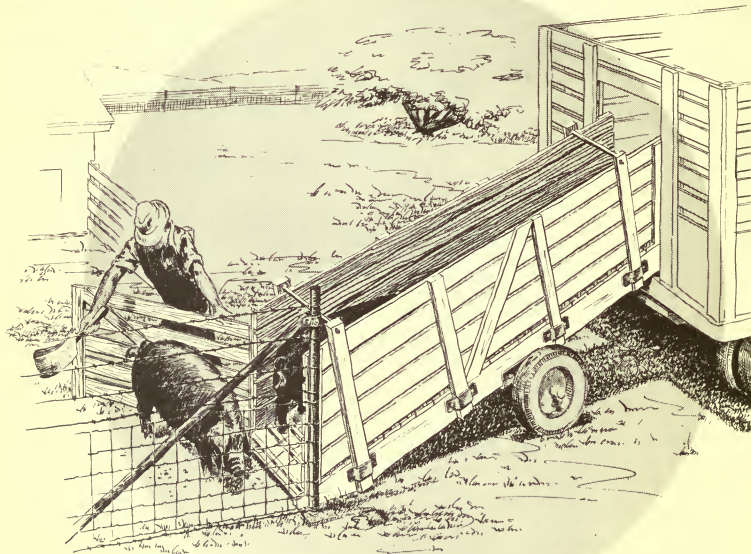
Two types of movable loading chutes are illustrated on this page.

The chute on the left is on skids for moving, but the post and beam support is set up permanently at points where the chute will be most frequently used.

The chute shown below is mounted on an old wheel and axle assembly for easy moving from place to place. It has a tow bar that slides under the chute so that it is out of the way when not in use.

### PLAN NO. 5799

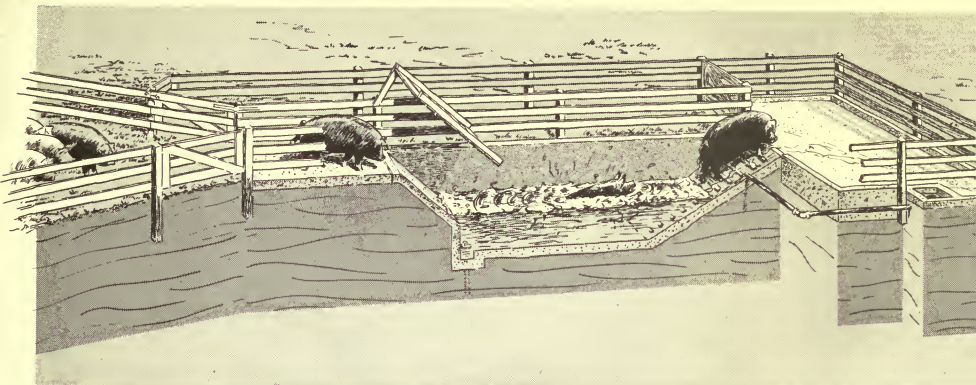
( 1 SHEET )



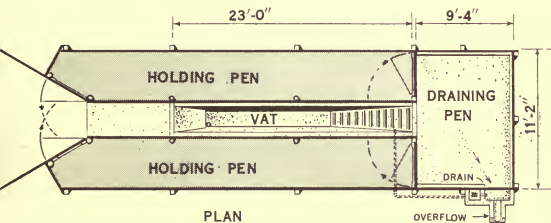
### PLAN NO. 5798

( 1 SHEET )

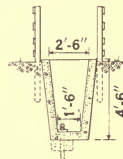




CUTAWAY VIEW



PLAN



CROSS SECTION  
THROUGH VAT

## ***DIPPING VAT***

Dipping vats are convenient when a large number of hogs must be disinfected or treated for lice.

This well-arranged layout includes not only the vat but a draining pen and two holding pens.

The concrete vat has cleated ramps to prevent hogs slipping. It may be drained after use.

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(1 SHEET)

## HOW TO ORDER WORKING DRAWINGS

Working drawings for buildings and equipment listed in this publication may be obtained through the county agent or from the extension agricultural engineer at the State agricultural colleges in the southern region. In many of the States there is a nominal charge for these plans.

In ordering plans be sure to give the number of the plan wanted as well as the title.

If you are unable to obtain working drawings of the plans you want from your own State college, the name of the nearest State college handling the plans may be obtained by writing to the U. S. Department of Agriculture, Farm Buildings Section, Plant Industry Station, Beltsville, Md.

The Department of Agriculture does not distribute working drawings for any of these plans and can only refer you to one of the State colleges where they may be obtained.